

NOVAKOVICH, V.I., aspirant

Longitudinal forces in a continuous rail track during repair.
Vest. TSNII MPS 24 no.1:44-48 '65. (MIRA 18:6)

1. Khar'kovskiy institut inzhenerov zheleznodorozhnogo transporta.

USSR/Microbiology. General Microbiology

F

Abs Jour : Ref Zhur-Biol., No 13, 1958, 57465

Author : Zhutsidlo L., Stakhov A., Novakovskaya A.,
Matskevich I., Rudzkiy E.

Inst : Academy of Sciences of Poland

Title : Chemical and Biological Properties of Cell Mem-
branes of Yeasts and Yeast-like Fungi (Species
Candida, Monilia, Cryptococcus, and Geotrichum)

Orig Pub : Byul. Pol'skoy AN, 1956, Otd. 2, 4, No 12,
451-454

Abstract : Insoluble polysaccharides similar to yeast zy-
mase were extracted from the yeast-like fungi
Candida albicans, Cryptococcus pulcherrimus, and
Geotrichum pulmonale after their separation from
the antigen active polysaccharides. They con-

Card 1/2

Apr 50

USSR/Medicine - Paratyphoid
Typhoid Fever

"Peculiarities of the Temperature Curve in Cases of Typhoid Fever and Paratyphoid," A. A. Novakovskaya, Clinical Dept, Inst imeni Mechnikov, Moscow Clinical Infection Hosp

176780

"Sov Med" No 4, pp 11-13

Discusses results of study of temp curves of 2 paratyphoid cases and 8 typhoid cases when readings were taken every 3 hr. Fluctuation in temp at height of disease was as much as 1.5 to 3.0 during the day. Number of case histories, 3 fever charts. Head, Clinical

Dept, Inst imeni Mechnikov, G. M. Kapnik; Chief Phys, Moscow Clinical Infection Hosp, N. G. Zaleskver.

176780

NOVAKOVSKAYA, A. A.

NOVAKOVSKAYA, A.A.; TIKHOMIROVA, A.N.

Study of nicotinic acid metabolism in dysentery. Vop.pit. 13 no.1:
15-21 Ja-F '54. (MLRA 7:1)

1. Iz kafedry infektsionnykh bolezney i Moskovskogo ordena Lenina
meditsinskogo instituta i iz laboratorii izucheniya vitaminov
(svednyushchiy - professor V.V.Yefremov) Instituta pitaniya Aka-
demii meditsinskikh nauk SSSR.
(Dysentery) (Vitamins)

BULKINA, I.G.; BOBIN, A.V., prof.; BRYZHEVA, L.S.; LUKOMINA, A.
Yu.M.; OSVAKOVSKAYA, A.A.; POKHYSKIN, V.I.; PLOTNIN, Ya.
Ye.D.; SEDLOVETS, M.P.; STANISLAVA, V.S.; TSEVCHUK, S.A.;
SEKHVATSALAYA, T.V.; TIKHOMIROVA, N.K.; KALIN, I.I., eds.

[Concise manual for infectious disease specialists; clinical
aspects, diagnosis, treatment] Kratkii spravochnik voprosov
infektsionnoi kliniki, diagnostiki, lecheniia. Leningrad, 1968.
1 ispr. Leningrad, Medicina, 1968. 287 p. (11 A 12-6)

1. Kafedra infektsionnykh bolezney i po M. Koryakova meditsin-
skogo instituta im. I.I. Dzerzhinskogo (For all except Russia).

NOVAKOVSKAYA, A. A.

NOVAKOVSKAYA, A. A. "Investigation of the metabolism of nicotinic acid in dysentery patients who have received a diet with added protein and nicotinic acid." First Moscow Order of Lenin Medical Inst imeni I. M. Sechenov. Moscow, 1956. (Dissertation for the Degree of Candidate in Sciences)
Medical

So: Knizhnaya Letopis', No. 18, 1956

№ 1185 SKRIN, P. 11

BUNIN, K.V.; YAGODINA, A.F.; NOVAKOVSKAYA, A.A.; ABRAMOVA, V.I. (Moskva)

Using disulfomin in acute dysentery. Klin.med. 35 [1.e.34] no.1
Supplement:32 Ja '57. (MIRA 11:2)

1. Iz kliniki infektsionnykh bolezney (zav. K.V.Bunin) I Moskovskogo
ordena Lenina meditsinskogo instituta.
(DYSENTERY) (SULFANILANILIDE)

BULKINA, I.G.; BUNIN, K.V., prof.; KUZNETSOV, V.S.; MIKHAYLOVA, Yu.M.;
NOVAKOVSKAYA, A.A.; POKROVSKIY, V.I.; POLUMORDVINOVA, Ye.D.; SEDLOVETS,
M.P.; STARSHINOVA, V.S.; TSEYDLER, S.A.; SHKHAVTSABAYA, T.V.; YAKHON-
TOVA, N.K.; SHERESHEVSKAYA, Ye.F., red.; ZUYEVA, N.K., tekhn. red.

[Pocket manual for the specialist in infectious diseases; clinical
aspects, diagnosis, and treatment] Karmannyi spravochnik infektsioni-
sta; klinika, diagnostika, lechenie. Moskva, Gos. izd-vo med. lit-ry
Medgiz, 1961. 233 p. (MIRA 14:7)

(COMMUNICABLE DISEASES) (MEDICINE--HANDBOOKS, MANUALS, ETC.)

NOVAKOVSKAYA, A.A.; TIKHOMIROVA, A.N.; GUSEVA, T.M.

Catechin content in the urine, blood coagulation time and the thrombocyte count in patients with acute dysentery on a background of vitamin P and ascorbic acid administration. Vop. pit. 22 no.3:19-22 My-Je '63. (MIRA 17:2

1. Iz kafedry infektsionnykh bolezney (zav. - prof. K.V. Bunin)
I Moskovskogo ordena Lenina meditsinskogo instituta imeni
Sachénova i iz otdela vitaminologii (zav. - prof. V.V. Yefremov)
Instituta pitaniya AMN SSSR, Moskva.

NOVAKOVSKAYA, E. G.

Use of amperometric titration in determining cadmium and
nickel in an active mass of an alkaline storage cell. Zav. lab.
28 no.1:28-29 '62. (MIRA 15:2)

1. Gosudarstvenny nauchno-issledovatel'skiy akkumulyatornyy
institut.

(Cadmium--Analysis)

(Nickel--Analysis)

KARASEVA, A.A.; ROZENSHTEYN, M.Z.; YAKOBI, F.S.; NOVAKOVSKAYA, I.V.

Effect of hydrodynamic factors on the operatic efficiency of
a packed phenol extraction column. Khim. i tekhn. topl. i masel
8 no.7:48-52 J1 '63. (MIRA 16:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke
nefti i gazov i polucheniya iskusstvennogo zhidkogo topliva.
(Phenols) (Packed towers)

KARASEVA, A.A.; NOVAKOVSKAYA, I.V.; ROZENSHTEYN, M.Z.

Analysis of industrial data on the extraction of oil fractions of
paraffin base crudes with phenol. Khim. i tekhn. topl. i masel 10
no.2:21-24 F '65. (MIRA 18:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke
nefti i gazov i polucheniyu iskusstvennogo zhidkogo topliva.

DAVYDOVA, S.Ya.;NOVAKOVSKAYA, I.Yu.

Intensity of inclusion into tissue proteins of radioactive methionine
in rats and dogs in parenteral feeding during protein deficiency.
Biokhimiia, Moskva 17 no.5:570-577 Sept-Oct 1952. (CLML 25:1)

1. Institute of Biological and Medical Chemistry of the Academy of
Medical Sciences USSR, Moscow.

YANITSKIY, Yu.; NOVAKOVSKAYA, K.

Lipoxidase activity and the development of microflora in wheat stored under different temperature and humidity conditions. Biokhim. zerna no.5:100-107 '60. (MIRA 14:5)

1. Otdel biokhimii i mikrobiologii Instituta zerna, Varshava.
(Wheat) (Lipoxidase)

1ST AND 2ND PAGES										3RD AND 4TH PAGES																																																	
PROCESSES AND PROPERTIES INDEX																																																											
<p>BC</p> <p style="text-align: right;">A-4</p> <p>Role of carbohydrates in protein metabolism in the overworked organism. E.S. NOVAROVSKAYA (Bull. Biol. Med. Exp. U.S.S.R., 1956, 1, 128-129).— Alterations in the protein and other metabolism produced by overworking are counteracted by giving glucose, which has a sp. dynamic effect and causes restoration of normal conditions. W. McC.</p>																																																											
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<table border="1"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td> <td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td><td>17</td><td>18</td><td>19</td><td>20</td> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>																				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20																				
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Relation between the allergic reaction and metabolic changes. A. A. Mittelshtedt, E. S. Novakovichaya, F. A. Verelova and P. P. Vukovitskaya. *Bull. Acad. Sci. USSR Div. Biol. Sci.*, 24: 36 (1960), *Physiol. Abstracts* 22: 680. During the development of, and at the height of, sensitization in man, characteristic metabolic changes were found concerning nitrogen, salts, water and oxygen. This is interpreted as change in neurohumoral regulation.

Changes in metabolism in certain cases of emotional stimulation. A. A. Mittelshtedt and R. S. Novakova. *Sov. Acad. Sci. (U. S. S. R.)* 45, No. 3, 119-20 (1967) (English). Studies are reported on 2 dogs and 2 men. The body wt., O₂ consumption, urinary vol., total N, and creatinine and creatine excretion were detd. before and after emotional disturbances. Sound effects for the dogs, lectures and exams for the men. Emotional stimulation was followed by loss of wt., increased O₂ consumption and loss of body protein and appearance of

urinary creatine. The role of inhibitory factors in the nervous control of metabolism is discussed. W. A. P.

AS 4 514 METABOLIC LITERATURE CLASSIFIED

The effect of a single subcutaneous injection of adrenal line on nitrogen metabolism in man. E. S. Novakova, L. S. Arkad'eva and V. S. R. 47. No 1. Zhurnal Khimicheskoi Meditsiny, 84, 1937. A single subcutaneous injection of 1 cc of 1% adrenaline causes an increase in blood sugar and blood pressure. There is some retention of total N on the day of injection or on the following day. No other changes in N metabolism were observed. S. A. Karjala

ASD SLA METALLURGICAL LITERATURE CLASSIFICATION

LIST AND THE CRYSTAL		ANALYSES AND PROPERTIES INDEX		MAP AND 4TH CRYSTAL	
<p>CA.</p> <p>Metabolic reactions in skin. III. The influence of cortin on the content of inorganic ions. E. S. Novakova. <i>Russ. biochem. exptl.</i> 11, 61 (1947). (Chem. Zvest. 1948, 11, 100, cf. C. A. 40, 7145). Due to 4 ex. of cattle were injected subcutaneously into rabbits and the skin analyzed for Na, K, Ca and P. It was observed that the content of K in the serum remained unchanged, but an increase of Na occurred. In skin the quantity of Ca and K increases, whereas the water and Mo content decreases. These changes were observed during the first hour after administration of the hormone. The change of the K and Ca content influences the structure of the proteins of the skin manifested by a decrease of the swelling.</p> <p>Gertrude F. Perlmann</p>					
<p>ASD. B.L. RETAL. LEGAL LITERATURE CLASSIFICATION</p>					

ca

The influence of aniline on the physical-chemical properties of the nerve tissue. A. N. Magnitskii. *Trudy Vsesoyuzn. Inst. Eksp. Med.* 1, No. 2, 115-22. Expts. on ~~neuromuscular~~ preps. from *Rana temporaria* showed that aniline produced first a reduction and then an increase and reversal of the permeability to ions. These phenomena then lead to corresponding changes in the velocity of ionic displacement in the nerve tissue. These changes are apparently connected with the immediate action of the aniline on the colloids of the nerve, since they can be displaced only by the washing out of the aniline or by the action of a direct current. The change in the velocity of ionic displacement produces a corresponding change in the chronaxy and the rheobase of the nerves. In the case of local aniline action an etherochronism develops which leads to a disappearance of the nerve sensitivity. The influence of long-continued and acute aniline poisoning on the gas metabolism of guinea pigs. E. S. Novakov.

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shays. *Ibid.* 123-7. Neither chronic nor acute aniline poisoning administered through the air or through the skin produced any sp. changes in the gas metabolism of guinea pigs. Aniline poisoning, especially the acute poisoning, produced fatty degeneration of the liver, the kidneys, and the cardiac muscle and a chromatolysis of the cells in the anterior cornu of the spinal cord as well as a degeneration of the parenchymatous organs (liver, spleen). This last phenomenon is probably produced by a definite disintegration of erythrocytes in the organs mentioned. The influence of acute aniline poisoning on the circulation of the blood. A. M. Blinova and A. A. Medvedeva. *Ibid.* 129-30. Acute aniline poisoning in dogs produced a very rapidly appearing progressive reduction of the O₂ content of the blood, a reduction in the O₂-fixing power, the appearance of methemoglobin, a gradual sinking of the blood pressure and a weakening of the heart action. Role of the blood and of the nervous system in the processes of aniline poisoning. A. N. Magnitskii, A. M. Blinova and O. V. Versilova. *Ibid.* 137-9. After severing of the spinal cord in aniline poisoning a favorable effect on the nervous system was observed. The O₂-fixing power was effected only slightly. Through *Chem. Zvezd.* 1936, II, 130-1. Mary C. Miner

NOVITSKAYA, E. S.

Disturbances in the function of the liver during hepatofunctional degeneration. E. S. Novitskaya and O. E. Freidina. *Voprasy Med. Khim.* 3, 61-72 (1953); *Soviet. Zhur., Khim.* 1953, No. 5:12. --In order to det. the characteristics of disturbances in the liver activity of sick persons resulting from hepatofunctional degeneration, the total content of protein, the content of albumin, globulin, and fibrinogen in the blood, the secretory function, and also the content of urea N, amino acids, and NH₄ in the urine were ascertained. In the majority of sick persons, the total content of protein, the relation of albumin to globulin, and the content of prothrombin and fibrinogen were lowered. The glycogen-forming function of the liver departed from the norm after injection of galactose, which was not noticed (in the majority of cases) after injection of glucose. In an overwhelming no. of sick persons the capacity of the liver to remove bilirubin from the blood was impaired as detd by the Quick test. The urinary excretion of urea was lowered in some of the sick persons.

Marjorie Kelp

①

ZHURAVLEV, N.I., KAN'SHINA, N.F., NOVAKOVSKAYA, Ye.S. PERKEL', N.V.
RUBINSKTEYN, Yu.I. (Moskva)

Controversial aspects in the etiology of Laschin-Beck disease.
Klin.med. 36 no.6:148-152 Je '58 (MIRA 11:7)
(ARTHRITIS, etiol. & pathogen.
deformans endemica (Rus))

NOVAKOVSKAYA, Ye.S.

Changes in rye and wheat proteins under the influence of the growth of various strains of *Fusarium sporotrichiella* in the soil; a study of the etiology and pathogenesis of Urov Kaschin-Beck disease. Vop. pit. 18 no. 6:54-58 N-D '59. (MIRA 14:2)

1. Iz otdela pishchevoy gigiyeny Instituta pitaniya AMN SSSR, Moskva.

(ARTHRITIS) (GRAIN) (SOILS-MICROBIOLOGY)
(PROTEINS)

ACC NR: AP7009387

SOURCE CODE: UR/0354/66/002/002

AUTHOR: Uflyand, N. Yu.; Pozin, Yu. M.; Novakovskiy, A. M.; Rozents-veyg, S. A.

ORG: State All-Union Scientific Research Institute of Storage Batteries, Leningrad (Gosudarstvennyy nauchno-issledovatel'skiy akkumulyatornyy institut)

TITLE: Effect of the electrolyte concentration and of the cation nature upon behavior of the nickel oxide electrode. Part 2

SOURCE: Elektrokhiimiya, v. 2, no. 2, 1966, 251-254

TOPIC TAGS: battery component, ^{metal}electrode, nickel oxide, electrolyte, alkali electrolyte, lithium hydroxide, potassium hydroxide, cesium hydroxide, rubidium hydroxide

ABSTRACT: A study has been made of the effect of NaOH, LiOH, CsOH, and RbOH electrolytes in the 1-10 N concentration range on the degree of oxidation of a charged and discharged nickel oxide electrode. The purpose was to compare the effect of concentration of these electrolytes with that of KOH, which was determined in the first part of this study. The experimental data obtained in 1-10 N RbOH are of special interest. The discharge capacity of the electrode, defined as the difference

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UDC: 541.13

ACC NR: AP7009387

between the oxidation degree after charge and discharge, remained almost constant up to 10 N RbOH concentration and equal to 65% of the capacity. Discharge ceased in 10 N RbOH. Depth of charge of the electrode in RbOH was the same as in NaOH, KOH, and CsOH over the entire concentration range studied. In LiOH electrolyte up to 5 N the pattern of the electrode oxidation was the same as in KOH and NaOH. Depth of discharge, heat of wetting, swelling, and cation adsorption of the electrode were affected by KOH concentration. The changes in x-ray crystal structure of the working electrode were also correlated with electrolyte concentration. Orig. art. has: 2 figures. [W. A. 100] [JK]

SUB CODE: 07, 10/ ⁰⁹ SUBM DATE: 11Feb65/ ORIG REF: 002/ OTH REF: 001

Card 2/2

GORDONOVA, L.M., *and*: LIL'KOV, Ye.M., *inzh.*; NEVAKOVSKIY, A.M., *inzh.*;
POPTNOY, M.S., *and*: *tekhn.nauk*; STRETSKOV, V.K., *inzh.*

Analog computer for studying electrochemical transients in
electric power system. *Elektrichestvo* no.511-6 My '68.

(MIRA 18:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut elektricheskoy
energetiki.

L 11052-66 EWT(d)/EWP(1) IJP(c) BB/CG

ACC NR: AP6004791

SOURCE CODE: UR/0105/65/000/005/0001/0006

AUTHOR: Gorbunova, L. M.⁴⁴ (Engineer); Luginskiy, Ya. N.⁴⁴ (Engineer); Novakovskiy, A. N.⁴⁴ (Engineer); Stryutskoy, V. K.⁴⁴ (Engineer); Portnov, M. G.⁴⁴ (Candidate of technical sciences)

ORG: none

TITLE: Analog computer for studying transient electromechanical processes in power networks

SOURCE: Elektrichestvo, no. 5, 1965, 1-6

TOPIC TAGS: analog computer, computer application, computer calculation, computer simulation, electric engineering, electric network

ABSTRACT: The article describes the design and operation of an analog electronic generator built to simulate a power network for the purpose of studying the electromechanical transients. The terminal voltage of this generator is computed from the currents either by the Gorev-Park equations with the necessary assumptions or by the equations of motion assuming a constant emf behind the transient impedance. The $\sin(\omega_0 t + \delta)$ function is obtained by the method of composing velocities rather than by the method of composing angles. This way the circuit elements of the computer do not have to meet such stringent requirements as to their dynamic characteristics; the function converter has to work over the range of angle variation from $-\pi$ to $+\pi$ instead of covering a range of 6π ; also distortions at the instant of periodization are thus avoided. The entire device consists of five units. In the first one, the

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UDC: 681.14:621.311.1

L 11052-66

ACC NR: AP6004791

"circuit equation unit" (CEV) solves the equivalent equations of electromagnetic processes in the rotor; it also calculates the difference between electrical and mechanical torques as well as the accelerations. The latter quantity is fed into the second unit, the "integration of the equation of motion unit" (IEMV) where the displacement angle is calculated. The solution is converted into a voltage at line frequency in the third unit, the "voltage conversion unit" (VCV) which is also the output stage of the device. There are two more intermediate units, namely one for current conversion (CCV) where the alternating load current is resolved into the direct-axis and the quadrature-axis component. The regulator unit (RV) contains a model of both the excitation and the speed regulators. The device has certain features which made it possible to reduce its size as compared to the universal computer for solving the same problem: the number of amplifiers necessary for performing multiplication with components along the d- and q- axes has been reduced by half through combining the SEP-1M paired product units feeding the common summator. Another size-reducing feature is the use of RC circuits in the feedback loops and at the inputs of amplifiers. The article continues with the analysis of several operations performed by the computer, namely: the simulation of synchronous machine equations, the transfer from a mathematical model of the generator to a static model of the network (the latter is done by the "voltage conversion" and the "current conversion" units, while the former is done by the CEV and the IEMV). The regulator unit is described next, it is designed for varying and adding parameters and simulating frequency or angle regulation as well as water hammer or other conditions in the turbine-generator system. For calcu-

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ACC NR: AP6004791

lating stability and asynchronous conditions it is common practice to replace individual portions of a complex power system by equivalent generators and to solve their equations of motion including all electromagnetic and mechanical torques. An analog network for this kind of calculation is shown here separately. The article concludes with a description of general features of the model EPS-2 analog device which surpasses all other existing medium-capacity models in the number of multiplying networks. All components are designed for high reliability, with thyristors, semiconductor and thin-film resistors; the same type elements are used in the multiplying networks and in the sine-cosine function generators. The computer was checked out in simulating and calculating a 115 MW hydro-generator SV 1250/83 feeding an infinite bus through a line whose impedance is $x_L = 0.28$, $r_L = 0.06$ (per unit), at constant torque and constant excitation. The accuracy of the computer calculations were evaluated and on this basis several systems installed in Siberia were studied. It is suggested that development work be continued toward simplifying the electronic analog generator construction, also toward increasing its accuracy and stability. Orig. art. has: 7 figures and 8 formulas.

[JPRS]

SUB CODE: 09 / SUBM DATE: 06Feb64 / ORIG REF: 007 / OTH REF: 002

Card 3/3

NOVAKOVSKIY, G.; YUDINTSEV, A.

Prevent coal from going to the rock dump Mast. ugl. 6 no. 5:12
My '57. (MIRA 10:7)

1. Redaktor shakhtnoy gazety "V boy za ugol'" (for Novakovskiy).
2. Nachal'nik shakhty No. 5/7 trestu Anzherougol' (for Yudintsev).
(Coal mines and mining) (Salvage (Waste, etc.))

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CA

PROCESSES AND PROPERTIES INDEX

also preparation of chromium salts by chlorination of chromium from ores K. I. Lasev, M. S. Novakovich and Z. H'yashenko. *J. Chem. Ind. (Moscow)* 1933, No. 5, 32-6. At 800° the Cr in a mixt. of a Cr-Fe ore with 30% of its wt. of C is completely chlorinated, as are most of the other metals present. One part of ore requires 1.5 parts of Cl_2 . Rapid passage of the gas causes formation of green, sol. $CrCl_3$, but it is better to pass the gas slowly, and obtain the violet, insol. form, which may be washed free from $FeCl_3$ with H_2O . Heating $CrCl_3$ in air at 500° oxidizes it to Cr_2O_3 . Boiling the violet $CrCl_3$ with 10% of $CrCl_3$ dissolves it. $CrCl_3$ sublimes almost completely at 1100° in a stream of Cl_2 . HCl chlorinates the ore only above 1100° H. M. Leicester

COMMON AND RARE METALS

CHANGE ELEMENT

ASB-SLB METALLURGICAL LITERATURE CLASSIFICATION

RECORDS MAY ONLY BE MADE IN THESE COLUMNS

RECORDS MAY ONLY BE MADE IN THESE COLUMNS

COMMON ELEMENTS										PROCESSES AND PROPERTIES INDEX										1ST AND 2ND COLUMNS										3RD AND 4TH COLUMNS									
C 4										Reduction of Fe_2O_3 by illuminating gas M. S. Novakovsky and L. I. Ponomarevskaya. <i>Trudy Inst. Akad. Nauk SSSR Gosudarst. Univ. S.</i> 243-8(1940). <i>Abstr. Ref. Ser. 4</i> , No. 9, 34(1941).—The velocity of reduction of Fe_2O_3 by illuminating gas was studied at 450, 500, 550 and 600°. The best temp. for the reduction is 550° W. R. Henn										9																			
METALLURGICAL LITERATURE CLASSIFICATION																																							
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7

Ad

A rapid method for the determination of titanium M. S. Novakovskii and D. B. Tsionovskaya *Zhurnal Anal. Khim.* No. 1, 103-4 (1940). — A method for detg. Ti in the presence of Fe by titrating with $K_2Cr_2O_7$ or $FeCl_3$ in the presence of 0.5% aq. indigo carmine soln. is proposed. The method is very rapid and accurate and is recommended for plant analyses for the detn. of Ti in ferrotitanium. The detn. of Ti requires not more than 5 min. (excluding the time necessary for dissolving the sample). After dissolving the sample transfer the soln. to a measuring flask and dil. to 200 ml. with 2% H_2SO_4 . Mix 20 ml. of the soln. (contg. 0.1 g. of the sample) with Zn amalgam, shake for 3 min., pass Cl_2 through the soln., add 2-3 drops of the indigo carmine indicator and titrate with $K_2Cr_2O_7$ or $FeCl_3$ until a blue-green color is obtained. Fe can also be reduced with Bi amalgam in the presence of Ti. In 0.5 N HCl the Bi amalgam reduces only Fe.

W. R. Henn

ASAC SLA METALLURGICAL LITERATURE CLASSIFICATION

NOVAKOVSKIY, M.S.; SHMAYEVA, T.M.

Polarographic study of coordination between Tl^+ and $S_2O_3^{2-}$. Ukr.
khim.zhur. 20 no.6:615-619 '54. (MLRA 8:3)

1. Khar'kovskiy gosudarstvennyy universitet im. A.M.Gor'kogo,
kafedra khimicheskoy tekhnologii.
(Compounds, Complex) (Thallium)

NOVAKOVSKIY, M. S. and RYAZANTSEVA, A. P.

"Complex Compounds of Thallium with the Thiodulfate Ion".
 Ich. Zap. Khar'kovsk. Un-ta, Vol 50, Tr. N.-I. In-ta Khimii i Khim Fak, Vol 11,
 pp 89-95, 1954.

Investigated the composition and stability of the $[TlS_2O_3]^-$ complex ion.
 Determined the solubility of $Tl_2S_2O_3$ in $Na_2S_2O_3$ solutions of various
 concentrations at 25°. From this data, the number of coordination groups in the
 formed complex ion were calculated. $Na [TlS_2O_3]$ was synthesized from a concentrated
 solution of $Na_2S_2O_3$ and a saturated solution of $Tl_2S_2O_3$. The product was in gel
 form and was readily soluble in water. $K [TlS_2O_3]$ was prepared in crystalline form.
 (RZhKhim, No 4, 1955)

SO: Sum No 884, 9 Apr 1956

ADAMOVICH, L.P.; NOVAKOVSKIY, M.S.

Determination of the composition of complexes in stepwise complexing. Zhur.ob.khim.25 no.7:1308-1311 J1'55. (MLRA 3:12)

1. Kharkovskiy gosudarstvennyy universitet.
(Compounds, Complex)

NOVAKOVSKIIY, M.S.

5000

✓ The determination of the constitution of complex in stepwise complex formation. L. P. Adamovich and M. S. Novakovskii (State Univ., Kharkov). *Zhur. Obshchei Khim.* 25, 1308-11(1953). The electrometric methods (e.g. polarography) used by Yatsimirskii (C.A. 43, 13367k) and others to det. the coordination nos. of the ions present in mixts. of ions differing only by coordination no. is not reliable in all cases. The polarographic method is based on a plot of the log of the concn. of the ligand vs. the half-wave potential. To prove the existence of a complex there should be a significant linear section (extending through a change of 2 units of log concn.) in the curve obtained. In the absence of such a linear section, there can be ascertained only the max. and min. coordination nos. possible in the system. The use of such a curve to calc. instab-

~~has been demonstrated by an independent method.~~ D. B. 74

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NOVAKOVSKIY, M.S.; MUSHKINA, M.G.

Interaction of zinc salts with thiosulfate and rhodanide ions.
Ukr.khim.zhur.22 no.3:313-319 '56. (MLRA 9:9)

1.Khar'kovskiy gosudarstvennyy universitet imeni A.M.Gor'kogo.
(Zinc salts) (Thiocyanates) (Thiosulfates)

SOV/137-57-6-9526

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 6, p 29 (USSR)

AUTHORS: Novakovskiy, M.S., Ginzburg, D.M., Ponirovskaya, L.I.

TITLE: The Solid-phase Reaction Between Calcium Oxide and Aluminum Oxide (O vzaimodeystvii okisi kal'tsiya s okis'yu alyuminiya v tverdoy faze)

PERIODICAL: Uch. zap. Khar'kovsk. un-t, 1956, Nr 71, pp 103-106

ABSTRACT: A thermodynamic analysis is made of the reactions of formation of $\text{CaO} \cdot \text{Al}_2\text{O}_3$, $2\text{CaO} \cdot \text{Al}_2\text{O}_3$ and $3\text{CaO} \cdot \text{Al}_2\text{O}_3$ from $\text{CaO} + \text{Al}_2\text{O}_3$ in the solid phase. As temperature rises, the first to form is $\text{CaO} \cdot \text{Al}_2\text{O}_3$, followed by enlargement of the crystals and an increase in the amount of compound. When the crystals attain a given size, the formation of a new compound (apparently $5\text{CaO} \cdot \text{Al}_2\text{O}_3$) begins. However, at all temperatures, the end product of the reaction of CaO and Al_2O_3 is $3\text{CaO} \cdot \text{Al}_2\text{O}_3$

S.G.

Card 1/1

USSR/Statistical Physics - Thermodynamics.

D-3

Abs Jour : Referat Zhur - Fizika, No 5, 1957, 11429

Author : Novakovskiy, M.S., Ponirovskaya, L.I.

Inst :

Title : Concerning the Problem of the Values of the Entropy for Aluminates of Calcium.

Orig Pub : Uch. zap. Khar'kovsk. un-ta, 1956, 71, 263-264

Abstract : To obtain the values of the entropy S of aluminates of calcium, required for thermodynamic calculations of manufacturing processes, but not contained in the handbook literature, the authors propose an empirical equation of the type $S = AM + B$, where M is the molecular volume of the compound, $A = 0.52$, and $B = -3.5$ (constants). The values of S computed by this method differ little from those calculated by the majority of other similar methods.

Card 1/1

$4-7.2 \times 10^{-20}$ M. The solubility of I was studied in solutions of NaOH at 20°C and 40°C and in solutions of NaOH at 20°C

NOVAKOVSKIY, M.S.

3-58-4-9/34

AUTHOR: Gel'fenbeyn, L.L., and Novakovskiy, M.S.

TITLE: University and School (Universitet i shkola)

PERIODICAL: Vestnik Vysshey Skoly, 1958, # 4, pp 33 - 37 (USSR)

ABSTRACT: The author refers to press discussions on deficiencies in pedagogical training which have allegedly resulted from the insufficient number of instruction hours allotted to this field. The experience of the Khar'kovskiy universitet (Khar'kov University) has illustrated another cause for these deficiencies.

The university curricula provide sufficient time for the pedagogical training, but the majority of the general and special lecture courses, as well as the practical and laboratory exercises lack a definite pedagogical trend; instructors do not emphasize those sections and questions which are of greatest significance to the future secondary-school teacher.

The USSR Ministry of Higher Education is also to blame for approving the general and special-course programs without taking into account the secondary school teachers training. Universities do not sufficiently utilize their possibilities to organize specialized optional courses. University instructors are themselves insufficiently familiar with school life; there is no liaison between university and school.

Card 1/2

University and School

3-58-4-9/34

The poor liaison between Khar'kov University and the secondary school is then described, and means of bettering this contact are given.

ASSOCIATION: Khar'kovskiy gosudarstvennyy universitet imeni A.M. Gor'kogo
(Khar'kov State University imeni A.M. Gor'kiy)

AVAILABLE: Library of Congress

Card 2/2

NOVAKOVSKIY, M.S.; MUSHKINA, M.G.

Cadmium pyrophosphate complexes. Zhur.neorg.khim. 7 no.5:
1068-1073 My '62. (MIRA 15:7)
(Cadmium compounds) (Pyrophosphates)

NOVAKOVSKIY, Mark Samoylovich; ADAMOVICH, L.P., doktor khim.nauk,
prof.,otv. red.; NESTERENKO, A.S., red.

[Laboratory work in the chemistry of complex compounds]
Laboratornye raboty po khimii kompleksnykh soedinenii.
Khar'kov, Izd-vo Khar'kovskogo univ., 1964. 202 p.
(MIRA 17:11)

NOVAKOVSKIY, M.S.

Experience in using automatic coagulant batch meters. Vod. 1 san.
tekh. no.6:9-11 S'55. (MLRA 9:1)
(Water--Purification) (Automatic control)

NOVAKOVSKIY, N.

Automatic control for rapid filter systems. Zhil.-kom. (MLRA 10:2)
khoz. 6 no.8:10-12 '56.

1. Nachal'nik eksperimental'nogo tsekha Stalinskoy vodoprovodnoy
stantsii.

(Filters and filtration)

(Automatic control)

MIKHAYLOV, Vladimir Andreyevich; NOVAKOVSKIY, Nison Samoylovich; SEMENOV,
V.S., red.; PANCHENKO, M.P., red. izd-va; LELYUKHIN, A.A., tekhn.
red.

[Automation of purifying structures in city water-supply systems]
Avtomatizatsiia vodochistnykh sooruzhenii gorodskikh vodoprovodov.
Moskva, Izd-vo M-va kommun. khoz. TSFSR, 1960. 192 p.

(MIRA 14:6)

(Water--Purification) (Automation)

KASTAL'SKIY, Aleksandr Aleksandrovich, doktor tekhn. nauk, prof.;
MINTS, Daniil Maksimovich, doktor tekhn.nauk, prof. Prinimali
uchastiye: MIKHAYLOV, V.A., kand. tekhn. nauk; NOVAKOVSKIY,
N.S.; ABRAMOV, N.N., doktor tekhn. nauk, prof., retsenzent;
NIKIFOROV, G.N., kand. tekhn. nauk, dots., retsenzent; PREGER,
Ye.A., retsenzent; BULYGIN, A.K., retsenzent; LIPKIN, Ye.V.,
retsenzent; VOZNAYA, N.F., kand. khim. nauk, retsenzent;
BELOV, A.N., dots., retsenzent; AGRANONIK, Ye.Z., kand. tekhn.
nauk, retsenzent; NOVIKOV, P.V., inzh., retsenzent; SHVARTS,
R.B., inzh., retsenzent; KONYUSHKOV, A.M., kand. tekhn.nauk,
nauchnyy red.; NIKOLAYEVA, T.D., red. izd-va; GOROKHOVA, S.S.,
tekhn. red.

[Water treatments for drinking and for industrial uses] Podgo-
tovka vody dlia pit'evogo i promyshlennogo vodosnabzheniia.
Moskva, Gos.izd-vo "Vysshaia shkola," 1962. 557 p.

(MIRA 16:1)

1. Kafedra vodosnabzheniya Leningradskogo inzhenerno-
stroitel'nogo instituta (for Nikiforov, Preger, Bulygin,
Lipkin, Voznaya, Belov, Agranonik).

(Water--Purification)

NOVAKOVSKIY, N.S., inzh.

Automation of the group of filters of the Academy of
Municipal Services system. Vod. i san. tekhn. no. 4:7-9
Ap '65.

(MIRA 19:1)

NOVAKOVSKIY, S. V.

B-25 NOVAKOVSKIY, S. V. Chastotnaya modulyatsiya (Frequency Modulation). Moscow, Gos. izd-vo lit-ry i izobrazovaniya i radi, 1977. 112p. DDC TK6563.N65; LNYE No. 174-A

A compilation of questions concerning frequency modulation written largely on the basis of literature from American journals. It contains a theory of frequency modulation problems and schematic material of practical importance.

NOVAKOVSKIY, S.

20712. Novakovskiy, S. i Saraylov, G. Izobreteniye detektora "R. S. - 1". Moskva, 1949
No. 6, s. 2-44

See: IZVESHCHENIYA - Vol. 18, Moskva, 1949

1. NOVAKOVSKIY, S.V.
2. USSR (600)
4. Technology
7. Technique of frequency modulation in radio broadcasting. Moskva, Gosenergoizdat, 1952

9. Monthly List of Russian Accessions, Library of Congress, March, 1953. Unclassified.

NOVAKOVSKIY, S. V.

Frequency modulation technology in radio broadcasting Moskva, Gos. energ. izd-vo, 1952.
303 p. (52-29903)

TK6555.K655

NOVAKOVSKIY, S. and PISARZHEVSKIY, O.

"Color on the Television Screen," (Tsvet na Ekране Televizora), Radio, No 11,
pp 48-51, 1953.

Translation D 178253, 22-3-55

NOVAKOVSKIY, Sergey Vasil'yevich; REHARD, Vladimir Borisovich; YEFIMOV, A.P.,
redaktor; USHOMIRSKAYA, M.M., redaktor; KHELEMSKAYA, L.M., tekhnicheskiiy redaktor.

[Moscow presents] Pokazyvaet Moskva. Moskva, Gos.izd-vo lit-ry po
voprosam svyazi i radio, 1954. 95 p. (MLRA 8:4)
(Television)

NOVAKOVSKIY, S.V.

YEFIMOV, A.P., kandidat tekhnicheskikh nauk.

S.V. Novakovskii, G.P. Samoilov "Frequency modulation technique
in radio communication." Reviewed by A.P. Efimov. Vest.sviazi 14
no.8:30 Ag '54. (MLSA 7:9)

(Novakovskii, S.V.) (Samoilov, G.P.) (Radio frequency modulation)

NOVAKOVSKIY, S. V.

"Calcul de la Luminance Pour un Recepteur De Television en Couleurs."

paper submitted at Intl. Symposium on Physical Problems of Color Television-
Intl Union of (IUPAP) Pure and Applied Physics, Paris, France, 2-6 Jul 57.

NOVAKOVSKIY, S. V. and YERMAKOV, D. I.

"Television Standard USSR GOST 7845-55," S. V. Novakovskiy and D. I. Yermakov, Elektrosvyaz, No 1, Jan 57, pp 24-35

The new television broadcasting standard GOST 7845-55, which was prepared by the Scientific Research Institute, Ministry of Communications, and approved on 31 December 1955 by the Committee on Standards, Measures, and Measuring Instruments, prescribes the following parameters in TV broadcasting practice: number of lines per frame (625), width of radio channel (a total of 8 Mc, of which 6 Mc video channel, 0.25 Mc audio channel), methods of scanning, polarity of transmission, modulation methods (AM for video transmission and FM for audio), radiation polarity (horizontal for electric field), the black level, the separation of audio and video carrier frequencies, and others.

The picture ratio was fixed at 4 to 3, with a reservation for a future change of 11 to 8, so as to conform with motion-picture standards.

"The resolving capacity of a TV system determines the geometric definition of the image, i.e., the number of small elements n in each frame discernible to the eye, which in turn depend on the number of scan lines Z , number of fields per second n' , and the width of the pass-band Δf . The relation between these values for interlaced scanning is determined as follows: $n \approx MN$; $M \approx K, Z(1-\beta) : f = \frac{n n'}{4K(1-\alpha)(1-\beta)}$

where M and N are the number of discernible horizontal and vertical black and white lines, respectively.

α and β are relative duration of line and frame scan fly-back, respectively.

K_v is a factor which takes into account the loss of resolution vertically, caused by the line structure of the raster.

Generally, K_v , $(1-\beta) \approx 0.7$, $\alpha \approx 0.16$ to 0.18 , $\beta \approx 0.074$ to 0.08 , and $n' = 50$ according to the new standard.

For a special case, when the vertical resolution becomes equal to the horizontal, the expression for Δf becomes

$$\Delta f = K K_v \frac{2^2 n' (1-\beta)}{4(1-\alpha)} \quad ."$$

For the present standards of $\Delta f = 6\text{Mc}$, $Z = 625$ lines, and $n' = 50$, the values of N , M , and n become 630, 436, and 275,000, respectively. According to the new standards, the power intake of the audio channel is from 25 to 50% of the video channel. The video signal is amplitude modulated, with negative polarity and suppressed lower side band. The audio channel has a band width of 0.25 Mc and is frequency-modulated, with maximum permissible frequency deviation of ± 50 Kc.

Sum 1274

~~SECRET~~
AUTHOR: Novakovskiy, S.V.

129-10-10, 11

TITLE: TV-Standards of the IRO (International Radio Organization)
(Televizionnyy standart OIR)

PERIODICAL: Radiotekhnika, 1957, V 1. 1, Nr 10, pp. 24 - 17 (USSR)

ABSTRACT: In March 1957 the standards for the basic parameters of the monochromatic TV-system were passed as being 525 lines with a radio-channel width of 8 Mcycles at the 15th conference of the technical commission of the International Radio Association in Sofia. Eleven countries agreed to these standards: Albania, Bulgaria, Hungary, Vietnam, China, North-Korea, Mongolia, Poland, Rumania, the USSR and Czechoslovakia. The standards of the CIR are similar to those of the USSR, GOST 7845-55, which were accepted in December 1955. The author gives the differences between the two standards and in the enclosure he gives the basic parameters of both standards, the nominal parameters of the full TV-signal for both standards as well as a comparative table on the resolving power of the various TV-systems: in England, the USA, then Gerber, CIR-standards, GOST 7845-55 and in France. There are 3 figures, 3 tables and 3 Slavic references.

~~SECRET~~ 13

NOVAKOVSKIY, S. V. ; ISAYEV, A. M.

Effect of the image subject on the selection of the luminance
color of the kinescope screen for black-and-white TV and of the
equal signal white for color TV. Tekh.kino i telev. 4 no.9:58-62
S '60. (MIRA 13:9)

1. Nauchno-issledovatel'skiy institut Ministerstva svyazi SSSR.
(Color television)
(Television—Receivers and reception)

NOVAKOVSKIY, S.V.

Principal problems concerning the standardization of color
television broadcasting systems with quadrature modulation.
Elektrosviaz' 16 no.10:9-20 0 '62. (MIRA 15:9)
(Color television)

NOVAKOVSKIY, S.V.; BELYANIN, S.G.; MAR'INA, N.I.

Experimental study of the choice of color signals for color television. Radiotekhnika 17 no.8:43-52 Ag '62. (MIRA 15:7)

1. Deystvitel'nyye chleny Nauchno-tehnicheskogo obshchestva radiotekhniki i elektrosvyazi imeni Popova.
(Color television)

NOVAKOVSKIY, S.V.; MAR'INA, N.I.

Sensitivity of color television systems to linear distortions and noise. Radiotekhnika 19 no.8:44-52 Ag '64. (MIRA 17:9)

1. Deystvitel'nyye chleny Nauchno-tekhnicheskogo obshchestva radiotekhniki i elektrosvyazi imeni A.S. Popova.

NOVAKOVSKIY, V.A., gornyy master

Mechanize transportation of workers in mines. Bezop.truda v prom.
2 no.5:35 My '59. (MIRA 11:4)

1. Shakhta No.34 tresta Stalinogorskugol' Tul'skogo sovnarkhoza.
(Mine railroads)

AUTHOR: Novakovskiy, V.E.

SCV/122-58-8-24/29

TITLE: New Machines, Machine Tools and Automation Devices at the All-Union Industrial Exhibition of 1958 (Novyye mashiny, stanki i sredstva avtomatizatsii na Vsesoyuznoy promyshlennoy vystavke 1958 g)

PERIODICAL: Vestnik mashinostroyeniya, 1958, Nr 8, pp 75-81 (USSR)

ABSTRACT: The 1958 Exhibition features over 1 500 new types of machines, machine tools, instruments, automation devices and other types of equipment as well as more than 600 production processes. In the "Academy of Sciences" Pavilion, models of the 3 artificial earth satellites are shown in full size, together with the instruments for examining the physiological function of the dog, for measuring the ultra-violet sun radiation and the cosmic rays, communication equipment and others. New developments in the synthesis and application of polymers are shown in the Department of Chemistry. Methods of crystal growing under high pressures and temperatures are exhibited under the heading "Solid State Physics". A piston-less compressor producing up to 10 000 atm gas pressure, together with a multiplier, permit the growing of crystals and the examination of their properties at 30 000 atm and 2 000 °C.

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New Machines, Machine Tools and Automation Devices at the All-Union Industrial Exhibition of 1958

In the automation and remote control section, standardised unit systems and mathematical and electro-mechanical modelling are exhibited. A biological model of a manipulator represents a human hand controlled by the electrical currents in the muscle. In the Science Pavilion, a contactless remote-control installation and a continuous-action, remote-signalling installation are shown using magnetic elements with a rectangular hysteresis loop. Semi-conductor devices include radio apparatus, thermostats, household refrigerators and other units. In the universities pavilion, a betatron, created by the Tomsk Polytechnic Institute, with a radiation energy of 25 MeV is distinguished from other similar units by a higher intensity of radiation, stability of its energy level and the facility of changing the direction of the bundle of rays in space. The Odessa Polytechnic Institute has developed the design of a strain-gauge type lever-less balance in the form of an electronic computing device. Railway carriages are weighed in 0.2 sec and the exact weight of a railway train in motion can be measured.

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New Machines, Machine Tools and Automation Devices at the All-Union Industrial Exhibition of 1958

The Kuybyshev Aviation Institute demonstrates a magneto-electric wattmeter, incorporating germanium semi-conductor diodes with an upper frequency limit of 1 Mps for use in technical measurements at audio and ultrasonic frequencies. The Groznyy Petroleum Institute shows an ultrasonic device for the inspection of the quality of petroleum products. A compound mathematical device permitting the mechanical computation of certain integrals, the graphical integration of differential equations and certain geological calculations has been built by the Irkutsk State University. The Taganrog Radio-engineering Institute exhibits a system of overall control of complete oil installations with the help of the remote radio control of oilwell equipment. The system claims high reliability, independence of weather or time, cheapness compared with underwater communication lines, a radius of action of up to 25 km and a signal time lag below 1.5 sec. It is stated that this is the first installation of this kind either in the Soviet Union or abroad. A high-speed film camera, providing 200 000 frames per second for a duration of between 0.2 and 0.45 sec. has

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New Machines, Machine Tools and Automation Devices at the All-Union Industrial Exhibition of 1958

been developed by the Leningrad Institute of Precision Mechanics and Optics. In the Chemical Industries Pavilion, a multi-storey dwelling house section shows a two-room flat with plastic used as facing material, fillers and other elements. A racing motor car body of plastic materials, a boat and other consumption goods made of plastics, reinforced with synthetic fibres are shown. Plastic structural materials exceeding the strength of steel and not subject to corrosion are exhibited. In the coal-industry section, the new equipment includes cutter loaders designed by the Lenin Prize Laureate, Gumenik. A new cutter-loader model K-19 (illustrated) for steeply sloping seams and a coal saw, PUR-2 designed for coal faces in sloping seams are exhibited. A cutter-loader, K-52-M, together with the KS-9 conveyor are designed for thin seams. High-frequency drilling hammers, PR-181 and PR-131 are stated to increase the output in drilling by a factor of 2. Underground hydraulic coal-getting is shown which is claimed to increase two fold the output of labour,

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to reduce the cost per ton of coal by a factor of 2.5 and to cut the number of operatives by the same factor compared with ordinary coal working. The cutter-loader K-57 is intended for the Moscow Region Coalfield under difficult geological conditions. Oilwell-drilling installations produced by Uralmash, designated 11DE and 9D are shown in the Oil and Gas Industries Pavilion. The self-propelled A-40 plant and the "Bakinets" Unit for the testing, setting to work and major overhaul of oilwell equipment are exhibited. An oilwell drilling remote-control desk reduces the manual labour in drilling operations. A model demonstrates the binding with phenol formaldehyde resin of the sand in the zone ahead of the oil face. The period between overhauls in the operation of oilwell pumps is thereby increased several times. New equipment includes a depth flow meter, a fly cutter without lower damper, an automated measuring trap, a motor control unit and others. In the geology section, a series of self-propelled units for drilling exploratory boreholes to various depths by the rotor, column and worm methods. Apparatus for

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geological and geophysical exploration is exhibited. Working models of the 150 MW steam turbine of the Khar'kovskiy turbogeneratorsnyy zavod) and of the 200 MW steam turbine of the Leningrad Metal Works are exhibited. The gas turbine built by the "Nevskiy Zavod" Works of Leningrad, designated GT 700-4 is shown in full size, featuring a compressor with automatic regulation and protective devices to ensure reliable operation. The automation of boiler units receives much attention. In the Power Station Section, an automatic regulating installation made by the Moscow "Komega" Works, designed for the largest boiler units of powerful district heating stations is exhibited. The apparatus supervises the operation of all parts of the unit and ensures the programme control of the combined operation of several boilers. The Biyskiy kotel'nyy zavod (Biysk Boiler Works) show a portable boiler, equipped with electronic regulators which supervise the operation of combustion, feed-water supply and superheated steam temperature. The model of a twin armature DC electric motor of 19 600 hp is shown in the Electrical

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Industry Section. The motor is intended for driving the propulsion screw of the atomic icebreaker "Lenin". Many new series of motors as well as power rectifiers of germanium and silicon are exhibited. Compared with selenium and copper oxide rectifiers these have a better efficiency, smaller size and lower weight. About 120 different types of electric measuring instruments are exhibited. In a special section devoted to new automation methods in engineering manufacture, an engine lathe, a capstan lathe, a milling and a drilling machine are demonstrated provided with the group method of operation developed by S.P. Mitrofanov, Candidate of Technical Sciences. It is stated that the application of this method in a shop producing small batches has yielded an annual economy of 5 million roubles. As an example of a successful solution of the programme-control method, a 3 co-ordinate milling machine with digital electronic-computer programme control is demonstrated, made by the Scientific Research Institute for Engineering Production. The machine is controlled by a magnetic tape and cuts the most complex surfaces with

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an accuracy of 0.03 - 0.04 mm. The installation is constructed on the basis of a copying milling machine, model 6441B. Universal machine tools assembled from standard units, as developed by NIAT permit set-ups of high output with relatively low investment. The machines operate with a semi-automatic cycle by means of simple programme control devices designed on the principle of switching transmitters. A drilling and a milling machine of this type are demonstrated in action. An operating, automatic production line, consisting of 16 units is exhibited, including 10 standard machines produced by ENIMS and the "Stankokonstruktsiya" Works for the production of stepped spline shafts of 150-430 mm length. The production line can be easily re-set from one shaft to another within its range. The cycle time is 30 secs for the smallest shaft and 60 secs for the largest. It is claimed that the use of this line yields an annual economy of 200 000 roubles, compared with existing processes. Many exhibits of most recent design permit the observation of the electro-erosion machining method which finds increasing

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application in machining complex shapes, hardened steels and small holes in hard and tough electrically-conducting materials. Modern piercing by ultrasound is demonstrated in several machines. Ultrasonic generators from 100 W to 10 kW, vats and automatic units for cleaning and etching of components with ultrasound are shown. Ultrasonic machining has made it possible to use blanking tools of carbide materials, which increase the tool life by a factor of 30-70 compared with tool steel. In certain plants, the adoption of 100 press tools of this type has yielded an economy of 1.5 million roubles. A machine, designated A372R, for electric-slag welding, a semi-automatic machine for titanium welding, an installation for broad-band deposition are among the exhibits in the welding section. A special machine for friction welding, developed by VNIIESO, is shown which is said to have yielded at 3 plants in Leningrad an economy of 500 000 roubles in 1957. Deposition under ceramic fluxes developed by the Zhdanovskiy metallurgicheskii institut (Zhdanov Metallurgical Institute) in collaboration with the "Azovstal "

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and Dnepropetsstal Works has been demonstrated in connection with the deposition on rolling-mill rolls, by which their wear-resistance has been increased twice and more. Within 10 months of 1957, the method has yielded at the "Azovstal'" Works an economy of 800 000 roubles. Cold-welding, welding in a carbon-dioxide atmosphere, welding in vacuum, vibrating contact deposition and other methods of electric welding are also demonstrated. In the press-working section, a new model of a forging press of the Voronezh Works is shown to replace forging and drop hammers. A coining press, model K-84-6v. of the Barnaul Plant with a maximum capacity of 800 tons is designed to eliminate final machining of components. A high-speed, automatic press with underslung drive, with 2-3 strokes/minute has been produced by the Taganrog Works. The "Krasnyy Proletariy" Works demonstrate an engineering and screw-cutting lathe, model IK-62A, which has a hydraulic copying attachment and a hydraulically controlled tail stock. This machine can be employed as a semi-automatic lathe and is based on a universal lathe. It is useful in

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batch-production. The auxiliary times are halved. A lathe provided with automatic loading has been converted into a fully automatic machine by the same makers. The Odessa Works imeni Kirov show a jig borer, boring 20 holes according to a prescribed programme. The Dmitrov Works show a milling machine with programme control by a perforated strip. All the motions of the machine table and the spindle, both cutting and auxiliary motions, are automatic. Apart from the programme control, the lathe has an electric copying device and the auxiliary time is completely eliminated. A number of machines are shown which have received the Lenin prize, namely, the gear-cutting automatic machine, model 525, designed by ENIMS, for cutting bevel gears and the tooth-grinding machine, type 5802. The model 525 machine, compared with the M. 100 type, has a greater output, namely, by 50% with high-speed steel tools and by a factor of 2 with carbide tools. An automatic production line, designated 1147, made by the "Imeni Ordzhonikidze" Works for the machining of an engine block is shown in the same pavilion. It consists of 5 motorised machining heads

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and two tapping units and has an output of 10 blocks per hour. In the foundry production section, an 8-station, automatic machine, model 837, is shown for producing shell moulds. The unit, made by the "Krasnaya Presnya" Works, ensures the manufacture of castings with a fifth grade of surface finish and produces 300 half moulds per hour. Automatic machines for inspecting the defects of ball-bearing balls by a photo-electric method are shown which replace 10 inspectors. A machine for the inspection of all the dimensions in a ball bearing race replaces 7 inspectors. In the motor-industry section, the Gorki Motor Works "Chayka", the overhead valve, 45 hp "Moskvich" in several body variants, the "UAZ" series of cars produced by the Ul'yancovsk Motor Works and some models of motor cycles, scooters and bicycles are exhibited. The Yaroslavl Works show new motor-cars in the open air section. Motor-cars mounted on wheels with tubeless air tyres, developed by NAMI and the Yaroslavl Works are shown. These machines have improved traction in trackless country. In the tractor and agricultural machinery section, among new models, the

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MTZ-50 wheeled tractor of the Minsk Works with a 4-cylinder 52 hp engine and a minimum fuel consumption of 185 g per effective horsepower-hour is exhibited. The tractor is started electrically. A separate unit-type hydraulic system permits the tractor driver to control soil treatment or other implements by himself. The tractor weighs 1 ton less than the MTZ-2 tractor "Belarus". A 3-wheeled tractor for cotton-growing fields is exhibited by the Vladimir Tractor Works - Vladimirskiy traktorny zavod - together with the "Tashsel'mash" plant. The new DT-56 tractor of the Khar'kov Plant powered by a diesel engine made by the "Serp i Molot" Works is also exhibited. It has several advantages compared with the current production model DT-54. New models of self-propelled chassis are shown, especially suitable for suspended implements. The DVSSH-16 model of the Khar'kovskiy traktorny sberozhny zavod (Khar'kov Tractor Assembly Plant) provides control of the implement by a hydraulic system. The chassis is sold with a set of implements for the basic, agricultural manipulations. A new combine harvester, type SK-3, of the Taganrog Works ful-

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fills modern grain-harvesting requirements for different regions of the country. A combine harvester provided with an overhung press is shown which harvests cereal plants by the direct or the separating method and simultaneously presses the straw and the chaff. This harvester makes wide use of hydraulic control and of acoustic and optical detectors. All the 1958 ploughs are outrigger-mounted by the tractor driver himself. Television receivers shown in the section "Radio Industry and Communication" have 11 channel reception. Broadcasting receivers based on semi-conductors include the "Voronezh" receiver powered by a solar battery consisting of 14 silicon elements connected in series, a receiver containing 9 semi-conductor germanium triodes of type P6. This is claimed to have an unlimited service life. The "Sputnik" receiver is powered by miniaturised accumulators but can also work with a solar battery. It weighs 800 g and receives the long wave and medium-wave ranges. Small, portable transmitters UKV, radio-relay communication lines P-60/120, photo-telegraph apparatus and self-Card14/19 contained telephone exchanges with co-ordinate switching

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logic are exhibited. Models of new ships, including the atomic ice-breaker "Lenin" are shown in the section on "Ship-building". In the section for the utilisation of atomic energy for peaceful purposes, a synchro-cyclotron with an output of 680 MeV and the most powerful synchro-phastron in the world with an output of 10 GeV are shown, designed for nuclear research. For the first time, methods of individual control are demonstrated, namely, the exact control of individual radiation by means of luminescent ionisation and photometry. These improve the measures taken to ensure the safety of operators. A table shows the isotopes produced in the USSR namely 505 stable and 228 radioactive isotopes. Many new devices and methods of study using isotopes are shown in the section "Industry and Agriculture"; these include an installation for measuring the thickness of rolled strip. At the Magnitorgorskiy metallurgicheskiy kombinat (Magnitogorsk Metallurgical Combine) this device permitted increasing the rate of rolling five-fold, reduced the idle time of the mill to one-tenth and saved 50 kg/ton of finished rolled product. An

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active demonstration reactor and a manipulator for handling radioactive materials in a hot chamber are shown. A charging unit for individual dose meters is provided with an atomic battery and is designed for a 20-year service life without changing parts when the intervals between dose-meter charging do not exceed 1 min. Using the present charging method, the batteries must be exchanged at least twice per annum. A radiographic inspection unit for metal parts, using thulium instead of cobalt is shown which is safer, yields a more sharply defined photographic image and has smaller bulk. When inspecting welded tubes, a saving of 200 000 roubles has been achieved by gamma-ray testing. A new radioactive fire detector of miniature-size signals the presence of smoke even from a cigarette. In the light industry pavilion, the Tula Works exhibit a continuous automatic knitting machine, for men's socks, which produces a pattern. This machine, type NOR-14, has a fully-automatic electrical drive with an electronic control and regulating system. Machines for footwear production are shown. A multi-system circular knitting machine, MFGP-22-45 for the

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knitting of plain and finished fabrics has a productivity 1.6 times greater than existing models. In the Cotton Pavilion, an open-air exhibit shows in action a modern, small cotton factory for the extraction of cotton fibres from cotton seed. The new machines in this plant increase productivity three-fold. The stripper unit made by the "Kustekstil'mash" and a small-size, carding machine ChMM-450, made by the "Vulkan" Works are shown. The automatic weaving loom, AP-100-5, of the Klimov Works maintains stable operation at 240 rpm. New, fully-automated production lines in cotton spinning increase the productivity of labour two-fold and the output per unit of floor space by 140% and incorporate an automatic bleaching line. In the Silk Pavilion, the first cocoon winding machine in the world, PK-750-ShL-2, is shown in which the processes of finding the filament end and the shaking of the cocoons are mechanised. The productivity of labour is increased two-fold. In a similar machine, KZ-150-ShL, the steaming of cocoons is also mechanised. The cocoon-winding, automatic machine, SKE-4-VU, is shown in action and machines provided

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with double-twisting spindles and electro-spindles are also exhibited, which double the output of the equipment. The weaving loom, AT-4-120-FnL, with a jacquard machine, also shown in action, is suitable for silk, rayon and synthetic fibres. In the linen and Wool Industry Pavilion, a centrifugal spinning machine, type PU 108-D, made by the Leningrad Works "Imeni Karl Marks" for the dry spinning of low-gauge linen thread is shown in action. Compared with existing machines, productivity is raised by 40%. The machine is claimed to be of original design without foreign equivalents. The mixing machine for wool fibres, type S-70-Sh, of the Priborskiy Engineering Works - Presnenskiy mashinostroitel'nyy zavod) mechanises the process of fibre mixing and increases its productivity two-fold. The twisting machine, KSh-83-1 T of the Tula Engineering Works increases the output per unit of floor space by a factor of 2.2 compared with present-day machines. The ANO-164-Sh unit of the "Izermash" plant for the special treatment of wool fabrics introduces into the wool industry water-proofing, non-shrinking, moth-proofing and other treatments. In the Fish Industry Pavilion, the Jack of a

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medium-size fishing trawler is erected which mounts equipment for fully mechanised fishing and treatment of herrings. In the Bread Pavilion, an open-air exhibit shows the roller -type flour mill of unit construction made by the Gorky Engineering Works imeni Vorob'yev for milling grain to produce flour of the first and second quality. The milling installation embodies pneumatic transport of the grain, the intermediate products and the bran and has an output of 20 tons per day. Automatic machines for the fractional separation of milk products are demonstrated in the Milk Industry Pavilion. A new, automatic line for filling with blended charge in the production of champagne by the bottle method is shown in the viticulture Pavilion. There are 9 photographs.

Card 19/19 1. Industrial equipment--TNR 2. Machines--Control systems
3. Machines--Automation 4. Satellite vehicles 5. Systems
--Growth

NOVAKOVSKIY, V I

AID P - 5136

Subject : USSR/Aeronautics - bibliography

Card 1/1 Pub. 135 - 21/26

Author : Novakovskiy, V. I., Eng.-Col.

Title : Development of guided missiles

Periodical : Vest. vozd. flota, 10, 82-85, 0 1956

Abstract : Review of the book "Development of Guided Missiles"
(Razvitiye Upravlyayemykh Snaryadov) by K. U. Getland,
translated from English into Russian.

Institution : None

Submitted : No date

Chemical Abst.
Vol. 48 No. 9
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Metallurgy and Metallography

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① Met
Corrosion of iron in concentrated sulfuric acid. V. M.
Novakovskii. J. Appl. Chem. U.S.S.R. 25, 355-8 (1952)
(Engl. translation).—See C.A. 47, 5340a. H. L. H.

NOVAKOVSKIY, V. M.

***A Method for Improving Bi-Metallic Copper Plating**

A. I. Levin and V. M. Novakovsky (*Zhur. Priklad. Khim.*, 1952, 25, (8), 874-879 (in Russian); *J. Appl. Chem. U.S.S.R.*, 1952, 25, (9), 1039-1043 (in English)).—L. and N. have studied the prepn. of Cu/Fe bimetal by electrodeposition of Cu from cyanide baths at high c.d. Using a bath contg. (g./l.): CuCN 20, NaCN 34.6, $\text{KNaC}_2\text{H}_3\text{O}_2$ 60, Na_2CO_3 30, it was found that the best corrosion-resistant deposits on a Pt cathode were obtained at a cathodic c.d. (D_1) of 20 amp./dm.² on electrolysis for 5-10 sec.; further deposition at this D_1 gave deposits which corroded more readily. In tests at various values of D_1 , the rate of deposition increased with increase in D_1 , but so did the cell voltage, reaching 13-15 V. at $D_1 = 50-60$ amp./dm.². Optimum conditions for the required deposits are considered to be $D_1 = 5-10$ amp./dm.² with a deposition time of 25-40 sec. To develop a method for obtaining deposits of any desired thickness, deposition at high c.d. with periodic reversal was investigated. At const. D_1 , the current efficiency was practically independent of the duration of a complete cycle. Data showing the effect of

changes in the ratio of (reverse current duration/direct duration) on the current efficiency are tabulated; the appearance and structure of the deposits was inferior only at ratios of 0.03 and less. The current efficiency decreased with increasing D_1 . It was also found to be negligible at the start of electrolysis, then to increase rapidly and finally approach a limiting value; this is because of the low H overvoltage on the original Pt surface. Satisfactory deposits are obtained in prolonged electrolysis (1.5 hr.); on repeated bending to 180° of a Cu-plated steel strip, until fracture, the deposit did not peel. As D_1 was increased, the structure of the deposit improved, then deteriorated; the value of D_1 at which the structure was best increased as the relative duration of the reverse current increased. Brightness improved as the cycle duration was increased, the optimum cycle time being greater as D_1 was reduced. Optimum conditions recommended are: D_1 , 8 amp./dm.², cycle period 4-5 sec., duration of reverse = 10% of direct period. Cu/Fe bimetal prepared in this manner did not exhibit H blistering on heat-treatment at 500°C.; this is presumably because the H produced in the cathode compartment is oxidized at the switch-over to anode.

—G. V. E. T. {

Novakovskiy, V.M.

NOVAKOVSKIY, V. M. -- "Methods for Increasing the Resistance [to Corrosion]
of Carbon Steel in Concentrated Sulfuric Acid," Card Tech Sci, Ural
Polytechnic Inst, Sverdlovsk, 1954, (KZhKhim, No 17, Sep 54)

see 22

NOVAKOVSKIY, V. M.

USSR/Chemistry - Physical chemistry

Card 1/1 : Pub. 22 - 34/47

Authors : Novakovskiy, V. M., and Levin, A. I.

Title : Anodic passivation of iron in concentrated sulfuric acid

Periodical : Dok. AN SSSR 99/1, 129-132, Nov 1, 1954

NOVAKOVSKIY, V.M.

✓ 2493* Connection Between the Potential of Zero Charge and
Physical-Chemical Characteristics of Metals. O svyazi mezhdu
potentsialom nulevogo zaryada i fiziko-khimicheskimi khar-
akteristikami metallov. (Russian.) V. M. Novakovskii, E. A.
Ukshie, and A. I. Levin. Zhurnal fizicheskoi khimii, v. 24, no.
10, Oct. 1955, p. 1847-1853.
On the basis of contemporary theory of electrode potential,
equations are derived which relate the potential of zero charge
with other physical-chemical characteristics. Tables. 13 ref.

(2)

NOVAKOVSKIY, V. M.

USSR/ Chemistry - Physical chemistry

Card 1/1. Pub. 147 - 12/21

Authors : Novakovskiy, V. M.; Ukshe, Ye. A.; and Levin, A. I.

Title : Relation between zero charge potential and the physico-chemical properties of metals

Periodical : Zhur. fiz. khim. 29/10, 1847-1853, Oct 1955

Abstract : The difference between a normal potential and a zero charge potential which is an intrinsic characteristic of a metal electrode, is described. Employing the modern theory of electrode potentials the authors formulated certain equations which prove a definite relation between the zero charge potential and the physico-chemical properties of metals. The physical sense of the constants included in some of the equations is explained. Thirteen references: 11 USSR, 1 USA and 1 Germ. (1937-1954). Tables.

Institution : Ural Polytechnic Inst. im. S. M. Kirov and the Ural Chem. Inst. Sverdlovsk

Submitted : February 15, 1955

NOVAKOVSKIY, V.M.

On the conditions of electrochemical equilibrium in metal - electrolyte systems. Zhur. fiz. khim. 30 no.12:2820-2822 D'56.

(MLRA 10:4)

1. Ural'skiy nauchno-issledovatel'skiy khimicheskiy institut Sverdlovsk.

(Electrochemistry)

NOVAKOVSKIY, V. M.

S/064/60/000/004/004/006
B015/B060

AUTHORS: Novakovskiy, V. M., Prozorov, A. P., Sokolova, L. A.,
Nusinov, Ya. Ye., Lapshina, E. F., Umnova, G. F.

TITLE: Corrosion^q of Pipes in Monohydrate and in the Drying Room
Acid of the Production of Contact Sulfuric Acid

PERIODICAL: Khimicheskaya promyshlennost', 1960, No. 4, pp. 59-64

TEXT: The authors studied the corrosion of pipes made of steel of the types Cr-10 (St-10)^q and Cr-20 (St-20)^q cast iron of the type G-15-32 (Sch-15-32)^q and the stainless steel types X18H9T (Kh18N9T)^q and X18H12M2T (Kh18N12M2T)^q in monohydrate and in the drying room acid of the contact sulfuric acid production under industrial working conditions. The pilot plant is schematically shown in Fig. 1. The specimens were bushes with diameters of 20 mm, 38 mm, and 50 mm, and lengths between 180-250 mm. The corrosion rate of noncooled steel pipes rises linearly with the throughflow velocity and exponentially with the temperature rise of the acid, and is independent of the pipe diameter. The corrosion

Card 1/2

NOVAKOVSKIY, V.M.; PROZOROV, A.P.; SOKOLOVA, L.A.; NUSIMOV, Ya.Ye.;
LAPSHINA, E.F.; UMNIOVA, G.F.

Corrosion of pipes in the monohydrate and in the desiccant
acid employed in the contact manufacture of sulfuric acid.
Khim.prom. no.4:323-328 Je '60. (MIRA 13:8)
(Pipe--Corrosion) (Sulfuric acid)

S/030/60/000/009/016/016
B021/B056

AUTHORS: Kolotyrkin, Ya. M., Novakovskiy, V. M.

TITLE: The Theory of Corrosion and Protection of Metals

PERIODICAL: Vestnik Akademii nauk SSSR, 1960, No. 9, pp. 130 - 133

TEXT: The authors review N. D. Tomashov's book: Teoriya korrozii metallov. Akademiya nauk SSSR (Academy of Sciences USSR). Institut fizicheskoy khimii (Institute of Physical Chemistry). Izdaniye AN SSSR (Publishing House of the AS USSR) 1959. Edition: 4,000 copies; volume: 590 pages; price: 35 rubles 70 kopecks. The book consists of four parts, of which the first two deal with the theory of chemical and electro-chemical corrosion processes. In the third and fourth part, the resistance to corrosion of technical metals and alloys is investigated. The last two parts are described as being carefully worked out, whereas the first two contain many mistakes and inaccuracies which are enumerated. In this, the reviewers refer to publications by A. N. Frumkin and K. F. Bongofer, and their collaborators. The third and fourth parts of the book, which deal with practical problems, are described as valuable. The first two parts.

Card 1/2

The Theory of Corrosion and Protection of
Metals

S/030/60/000/009/016/016
B021/B056

which deal with the theoretical problems, must be thoroughly revised
There is 1 Soviet reference.

Card 2/2

NOVAKOVSKIY, V.M.

Equilibrium and steady-state potential of the hydrogen cathode.
Zhur. fiz. khim. 34 no.2:473-474 F '60. (MIRA 14:7)

1. Ural'skiy nauchno-issledovatel'skiy khimicheskiy institut,
Sverdlovsk.

(Hydrogen) (Cathodes)

NOVAKOVSKIY, V.M.

Seat of the development of electromotive force in a galvanic
cell. [Trudy] UNIKHIM no.9:13-24 '61. (MIRA 15:12)
(Electromotive force)

NOVAKOVSKIY, V.M.

Criteria of chemical and electrochemical corrosion.

[Trudy] UNIKHIM no.9:5-12 '61. (MIRA 15:12)

(Corrosion and anticorrosives)

(Electrolytic corrosion)